



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,045	01/08/2004	Raman Patel	TEK-B	6070

7590 05/31/2006

Daniel J. Hudak, Jr.
Hudak, Shunk & Farine Co., L.P.A.
2020 Front Street
Cuyahoga Falls, OH 44221

EXAMINER

NUTTER, NATHAN M

ART UNIT	PAPER NUMBER
----------	--------------

1711

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/754,045		PATEL ET AL.	
	Examiner		Art Unit	
	Nathan M. Nutter		1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-11 and 13-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-11 and 13-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 3-11 and 13-31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The recitations in the claims regarding “wherein the toughened polymer composition has a greater impact resistance when compared to either a corresponding composition wherein the rubber component is uncured, or the thermoplastic polyolefin polymer component alone, or a combination thereof, and wherein the toughened polymer composition is substantially free of plasticizer,” does not find support in the Specification, as originally filed. The relationships, as recited, do not find support in the originally filed Specification. Applicants have not shown where support for the recitation in claim 11 of “above the melting point of the composition” can be found.

Claims 1, 3-11 and 13-31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in

Art Unit: 1711

the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The recitation in claim 1 of "wherein the toughened polymer composition has a greater impact resistance when compared to either a corresponding composition wherein the rubber component is uncured, or the thermoplastic polyolefin polymer component alone, or a combination thereof, and wherein the toughened polymer composition is substantially free of plasticizer," addresses the invention as being defined by reference to a desirable characteristic of property. These properties would be present in identical compositions as inherent characteristics. It would require the undue burden of experimentation to determine what the claims embrace.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-11 and 13-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation in claim 1 of "wherein the toughened polymer composition has a greater impact resistance when compared to either a corresponding composition wherein the rubber component is uncured, or the thermoplastic polyolefin polymer component alone, or a combination thereof, and wherein the toughened polymer composition is substantially free of plasticizer," is not clear as to its proper metes and bounds. The product of the claims is hence defined as being compared to other

products. The actual scope of the claims cannot be easily ascertained. As such, the claims are deemed to be vague and confusing.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-11 and 13-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coran et al (US 4,104,210) or Coran et al (US 4,141,878).

The reference to Coran et al (US 4,104,210) teaches the production of a thermoplastic vulcanizate (TPV), essentially identical to that produced herein as regards composition and constitutional parameters that may be employed with other polyolefin resins, as herein claimed. Note the paragraph bridging column 1 to column 2 and the paragraph bridging column 2 to column 3 for the broad concept and the production of the TPV. Further, note column 3 (lines 27-53) for the specific particle sizes of the dispersed phase, and the compositional limitations including the recitations in claims 4, 6-8, 14, 16-18, 23, 25-27 and 29. Further, note column 5 (lines 14-46) for the rubber constituent. At column 6 (lines 51 et seq) the reference shows the employment of extender oils. The reference teaches the addition of conventional additives at column 6 (lines 33 et seq) which would embrace flame retardants. The reference teaches broadly the employment of the resin blend composition with other thermoplastic polyolefin resins

at column 7 (lines 11-21). Surely, this broad recitation would embrace homopolymers, as well as copolymers. Subsequent employment of the resin blend composition in rotational molding operations would have surely been an obvious modification to an artisan.

The reference to Coran et al (US 4,141,878) teaches the production of a thermoplastic vulcanizate (TPV), essentially identical to that produced herein as regards composition and constitutional parameters, that may be employed with other polyolefin resins, as herein claimed. Note column 1 (line 50) to column 2 (line 44), and the paragraph bridging column 2 to column 3 for the broad concept, and the production of the TPV. Further, note column 2 (lines 38-44) for the specific particle sizes of the dispersed phase, and the compositional limitations including the recitations in claims 4, 6-8, 14, 16-18, 23, 25-27 and 29. Further, note column 5 (lines 14-46) for the rubber constituent. At column 4 (lines 19-43) the reference shows the employment of extender oils. The reference teaches the addition of conventional additives at the paragraph bridging column 5 to column 6, which would embrace flame retardants. The reference teaches broadly the employment of the resin blend composition with other thermoplastic polyolefin resins at column 6 (lines 28-40). This broad recitation would embrace homopolymers, as well as copolymers. Subsequent employment of the resin blend composition in rotational molding operations would have surely been an obvious modification to an artisan.

Claims 1-3, 5-7, 11-13, 15-17, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coran et al (US 4,130,535).

The reference to Coran et al (US 4,130,535) teaches the production of a thermoplastic vulcanizate (TPV), essentially identical to that produced herein as regards composition and constitutional parameters, that may be employed with other polyolefin resins, as herein claimed. Note column 2 (lines 1-19) and column 2 (line 53) to column 3 (line 26) for the broad concept, and the production of the TPV. Further, note column 5 (lines 7-47) for the rubber and polyolefin constituents. At the paragraph bridging column 5 to column 6, the reference shows the employment of extender oils. The reference teaches broadly the employment of the resin blend composition with other thermoplastic polyolefin resins at column 7 (lines 41-54). Surely, this broad recitation would embrace homopolymers, as well as copolymers. Subsequent employment of the resin blend composition in rotational molding operations would have surely been an obvious modification to an artisan.

Response to Arguments

The arguments presented in the Final rejection of 9 January 2006 are repeated herein since they are deemed to be relevant to the prosecution of the instant application.

With regard to the rejection of the claims over Coran et al (US 4,104,210), applicants assert that the "rubber component is present in an amount from about 2 to about 60 parts per 100 parts by weight of *the matrix polymer and the thermoplastic polyolefin component*. Thus, the toughened thermoplastic composition contains less

Art Unit: 1711

than about 37.5 parts of the ***rubber component*** per 100 parts by weight of the ***rubber component of the thermoplastic elastomer component, matrix polymer of the thermoplastic elastomer component, and thermoplastic polyolefin component.***

Applicants go on to point out that Coran et al (US 4,104,210) teach “at least 55 parts by weight of rubber per 100 parts by weight of polyolefin resin and rubber” at column 1 (lines 45-46). The measure disclosed in the reference is of a different basis than that calculated by applicants. The reference teaches the addition of other thermoplastic olefin resins at column 7 (lines 11-21). That passage states that the “properties of the modified resin depend upon the amount of thermoplastic elastomeric composition.” This is clear indication as to why one of ordinary skill would know to manipulate the amount of the rubber constituent. The reference goes on to teach that “the modified resin contains about 5 to 50 parts by weight of rubber per about 95 to 50 parts total weight of resin.” This is clearly within the bounds as recited and claimed herein. Applicants calculate an inclusion of 37.5 parts of rubber per 100 parts by weight of rubber (as the upper limit), matrix polymer and thermoplastic polymer. The patent clearly teaches a range that is within the range as contemplated herein. The passage recited by counsel at column 1 (lines 60-63) is relevant only so far as the rates of inclusion are recited for the rubber and resin alone and not as it is construed as being for the rubber, resin matrix and polyolefin. Furthermore, the product of the instant claims might be construed by applicants’ argument to have “reduced toughness” compared to that of the reference. Regardless, the comparison is not accurate.

With regard to the rejection of the claims over Coran et al (US 4,141,878), applicants again assert that the “rubber component is present in an amount from about 2 to about 60 parts per 100 parts by weight of the **matrix polymer** and the **thermoplastic polyolefin component**. Thus, the toughened thermoplastic composition contains less than about 37.5 parts of the **rubber component** per 100 parts by weight of the **rubber component of the thermoplastic elastomer component, matrix polymer of the thermoplastic elastomer component, and thermoplastic polyolefin component.**” Applicants go

Counsel goes on to point out that Coran et al (US 4,141,878) teach “(w)hen the quantity of cross-linked CSM rubber, in the absence of plasticizer falls below about 50 parts by weight per 100 parts by weight of polyolefin resin and CSM rubber” at column 2 (lines 32-38). The measure is of a different basis than that calculated by applicants. Further, the patent teaches the inclusion of plasticizers at column 4 (lines 36-40), and the instant claims do not exclude the use of plasticizers. The reference teaches the addition of other thermoplastic olefin resins at column 6 (lines 28-40). Applicants have ignored the fact that the reference teaches at column 1 (lines 55-60) that the amount of “about 85 to 35 parts by weight of cross-linked CSM rubber per 100 parts by weight of polyolefin resin and CSM rubber,” clearly overlaps with that recited and claimed herein.

Applicants allege that the rejection of claims 1-3, 5-7, 11-13, 15-17, 21 and 22 under 35 U.S.C. 103(a) as being unpatentable over Coran et al (US 4,130,535) is made in hindsight. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that

Art Unit: 1711

any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). With regard to the amount of extender oil employed, the reference teaches at column 6 (lines 19 et seq) that the "quantity of extender oil added depends upon the properties desired," and "the amount of extender oil depends, at least in part, upon the type of rubber." A skilled artisan would know to manipulate the amount of extender oil by these teachings. It is pointed out to applicants that this rejection was made under 35 USC 103 and not under 35 USC 102. Applicants attempt to use the standards of 35 USC 102 to nullify the reasoning set out by the Examiner.

Further, with regard to these arguments, it appears that in applicants' Response of 13 April 2006, applicants have so abbreviated what was stated in the arguments, above, as to be unclear in their response. The arguments propounded by the Examiner remain. The statements above, as to the rejections made under 35 U.S.C. 112 support the Examiner's position as to the Declaration filed by Patel. The Declaration has been considered but is not deemed to be relevant. The instant claims recite constituents that are taught by the references to Coran et al ('210), ('878) and ('535), as discussed in the rejections, above. It is pointed out to applicants that these rejections were made under 35 U.S.C. 103, and not under 35 U.S.C. 102, as apparently argued by applicants. Regardless of the thrust of Coran et al ('210), ('878) or ('535) documents, the

Art Unit: 1711

compositional limitations disclosed therein are deemed to obviate the recitations of the instant claims, as discussed above. Further, the many methods of molding available are known to skilled artisans. Choice of any particular method depending upon factors such as desired product or materials employed or available would be clear to the artisan.

With respect to the extender oil inclusion, a skilled artisan would know, as pointed out above, to limit, include or exclude oils depending on the desired products. Again, these rejections were presented under 35 U.S.C. 103, and not under 35 U.S.C. 102.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

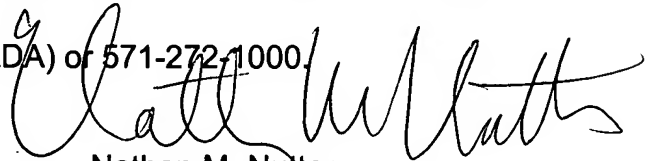
Art Unit: 1711

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan M. Nutter whose telephone number is 571-272-1076. The examiner can normally be reached on 9:30 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Nathan M. Nutter
Primary Examiner
Art Unit 1711

nmn

26 May 2006